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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

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OCT 30 1997

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In the Matter of)
)
Preemption of State and Local)
Zoning and Regulation on the Siting,)
Placement, and Construction of)
Broadcast Transmission)
Facilities)

~~WT Docket No. 97-296~~

MM 97-182

To: The Commission

**COMMENTS OF
THE CAPE COD COMMISSION**

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October 30, 1997

File of Series 023
L-7-1-02

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SUMMARY

The Cape Cod Commission (the "CCC") appreciates the opportunity to comment on the the Federal Communications Commission's (the "FCC") proposed rulemaking concerning the preemption of municipal authorities to review and regulate the construction of all broadcast facilities and/or the construction of DTV and FM radio station transmission facility relocations resulting from DTV construction.

As a matter of public policy, the CCC opposes the proposal to limit the scope of local review of HDTV facilities. The CCC believes that municipalities should be free to regulate the location, reasonable height , and appearance of such facilities in order to protect the character and appearance of neighborhoods within their boundaries, and thus, to protect the public welfare.

The CCC requests that the FCC decline to adopt strict and arbitrary time limitations on municipal decision making as proposed by the Petitioners. Adoption of strict time limitations is not necessary and, absent evidence of widespread abuse of local decision making processes, such questions should be left to the courts.

Furthermore, adoption of the proposed time limitations may unreasonable restrict the local permitting process; a process which is essential to ensure the protection of public safety and welfare.

The CCC respectfully suggests that the courts are the appropriate forum to resolve disputes concerning adverse determinations on HDTV permit applications. Such determinations will turn on local factors which a court is best suited to hear and weigh.

Finally, the CCC requests that the FCC preserve the right of municipalities to seek evidence from HDTV providers of compliance with the FCC's radio frequency (the "RF") emission standards. RF compliance directly impacts the public health and the public has a right to ensure that safety standards are being met.

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**COMMENTS OF
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The Cape Cod Commission ("CCC") submits these comments in response to the Notice of Proposed Rulemaking, released September 2, 1997, in the above-captioned proceeding ("NPRM").

The CCC was created pursuant to the Cape Cod Commission Act, Chapter 716 of the Acts of 1989, as amended. The CCC has an address and a principal place of business at 3225 Main Street, Barnstable, Massachusetts. The CCC is a regional land use planning and regulatory agency which provides planning and technical assistance to the fifteen towns which comprise Barnstable County, Massachusetts. The CCC is also the Regional Planning Agency for Barnstable County. CCC membership includes one appointed representative from each of the fifteen towns of Barnstable County and four appointed at-large members. Because many of the proposals in the NPRM, if adopted, would directly infringe upon the authority of municipalities to exercise police powers concerning public safety and welfare, land use and zoning that have been traditionally and

properly entrusted to them, the CCC raises the following concerns on behalf of its member towns.

INTRODUCTION

The NPRM seeks comments in two general areas: (1) should the FCC limit the scope of municipal review of HDTV facilities; and (2) should the FCC limit the time for local actions on HDTV permit applications?

For the reasons set forth below, the CCC urges the FCC not to adopt rules proposed by the Petitioners.

I. PETITIONERS' REQUEST TO STRICTLY LIMIT THE SCOPE OF MUNICIPAL REVIEW OF HDTV FACILITIES SHOULD BE DENIED AS A MATTER OF PUBLIC POLICY.

Petitioners' propose to: (1) completely preempt state and local review unless the local authority can demonstrate that the regulation is related to health or safety objectives; and (2) remove from local consideration tower marking and lighting issues, provided that the facility complies with applicable FCC and FAA regulations.

Petitioners' propose to strictly limit application of local regulations unless those regulations are based upon public health or safety objectives. In addition, Petitioners' propose to preempt local consideration of the health effects of RF emissions, effectively removing from local consideration any impacts to public health. The result is that Petitioners' seek to limit local review of HDTV facilities to a singular objective, public safety. If the FCC were to adopt the broadcasting industry's proposals, municipalities could consider only public safety impacts of HDTV facilities. The Petitioners' proposal would eliminate consideration of impacts of proposed HDTV facilities on the public welfare. The CCC does not believe that Congress intended to prohibit municipal consideration of public welfare issues with respect to the development of HDTV facilities.

Local governments are the appropriate, and typically the only level of government to address public welfare impacts resulting from a particular

development proposal. In order to effectively determine whether a particular development proposal derogates from the public welfare, municipalities must be free consider aesthetic impacts and resulting impacts to community character.

It is likely that the build-out of HDTV facilities will significantly impact the character of our communities. In the Synopsis of Notice, the FCC states that "The accelerated DTV transition schedule will require extensive tower modification and construction." (Emphasis added.) Extensive construction of HDTV facilities, which are highly visible, will certainly have an aesthetic effect and will effect community character. Municipalities must be free to work with providers to determine locations which are mutually beneficial to the town and the provider. Municipalities are already barred from prohibiting HDTV facilities; they should be allowed to adopt reasonable regulations to protect the character and appearance of neighborhoods within their boundaries. Such regulations will include the location, height and appearance of the broadcast facilities, taking into account the technical requirements of the providers.

Moreover, adopting Petitioners' proposal would eliminate the ability of municipalities to act cooperatively, by themselves or in conjunction with a regional planning agency, to encourage providers to agree upon a regional network, serving a number of municipalities with the most efficiently located and smallest number of broadcast facilities. Currently, municipalities can use their zoning and Home Rule powers cooperatively to induce HDTV providers, using geographic information systems, to form an efficient network on a regional basis with the fewest towers, while still modifying it on a local basis to avoid undue impact. If the Petitioners' proposals are adopted, municipalities may lose the leverage to require the formation of an efficient network.

The extent to which HDTV facilities are marked and lit (with the exception of lighting requirements of the FAA) will directly impact the community character of the area surrounding the facility. For the reasons set forth above, the CCC believes that the FCC should preserve local government's ability to regulate on the basis of aesthetic and community

character impacts of proposed HDTV facilities. We therefore respectfully request that the FCC not adopt regulations limiting the ability of municipalities to review the marking and lighting of HDTV facilities.

II. ESTABLISHING RESTRICTIVE, ARBITRARY TIME LIMITATIONS FOR LOCAL ACTION ON HDTV PERMIT APPLICATIONS IS UNNECESSARY AND WILL UNREASONABLY RESTRICT THE LOCAL PERMITTING PROCESS, A PROCESS WHICH ENSURES PROTECTION OF THE PUBLIC SAFETY AND WELFARE.

Petitioners propose to require municipalities to act: (1) within 21 days with respect to modifications of existing broadcast transmission facilities where no change in location or height is proposed; (2) within 30 days with respect to the relocation of an existing broadcast transmission facility from a currently approved location to another location within 300 feet; and (3) within 45 days with respect to all other requests. In addition, Petitioners propose that failure to act within these time limits would cause the request to be deemed granted.

A. Establishing Restrictive, Arbitrary Time Limitations for Local Action on HDTV Permit Applications is Unnecessary.

Although the Petitioners' request indicates otherwise, as general rule communities do not unreasonable delay action on development permit applications. On Cape Cod, local officials have been meeting with communications service providers to establish the best locations for communications facilities. Towns are working to integrate these facilities into their local planning and regulatory processes. Several personal wireless services facilities have been permitted and built, and there is no reason to believe that HDTV providers will be treated differently. (Please see the model bylaw, attached.)

The CCC believes that the providers should carry the burden of proving that the application of local regulations will result in an unreasonable delay to HDTV providers. That has not been our experience on Cape Cod. It would be premature for the FCC to adopt strict time limitations for local action this early in the build-out process in the absence

of proof of widespread abuses of the local process. Finally, the question of whether a municipality has unreasonably delayed action on a permit application is a matter suited for resolution in a court of law.

B. Establishing Restrictive, Arbitrary Time Limitations for Local Action on HDTV Permit Applications will Unreasonably Restrict the Local Permitting Process, a Process Which Ensures Protection of the Public Safety and Welfare.

Strict, arbitrary time frames for local action on HDTV development permit applications by municipalities may conflict with state and local requirements for public notice and comment. After receipt of an application and following required notice procedures, municipal boards and officials may find themselves with little or no time to consider and act upon HDTV provider requests. Most local boards are comprised of volunteers; their regular meeting schedule already absorbs a large amount of their free time. The restrictive time frames proposed by Petitioners could result in many additional meetings and hearings for these volunteers in order to meet broadcasters' desire for an extremely limited review process. In addition, the adoption the Petitioners' suggested time frames will, in some cases, result in preferential treatment for HDTV providers.

Regarding time frames for local review, the CCC respectfully suggests that the FCC adopt a rule stating that communities shall not unreasonably delay in acting upon local development permit applications for HDTV facilities. The CCC believes that when weighed against the benefits of local review, even a delay of up to "several months" to obtain local development permits is not an unreasonable delay.

Adopting a rule requiring municipalities to act within a "reasonable" time frame will ensure that local governments stick to their usual, if not an abbreviated time, local time frame for action upon HDTV permit applications. The FCC's accelerated construction schedule is protected by the adoption of such a rule. The top ten markets are more urban and thus presumably have a sophisticated permitting process capable of processing applications in an efficient and timely manner. In secondary markets in more rural areas, HDTV providers have two, four and five years to attain

build-out. In the most rural areas where one might expect the largest delay, the providers have the most time to obtain permits and construct facilities. The fact that it may take up to "several months" to obtain a permit does not create a severe hardship when the providers have two, four and five years to obtain permits and construct facilities. This is particularly true when one considers that municipal review will ensure that HDTV proposals will not be adverse to the public safety and welfare, a benefit which far outweighs a slight delay to the providers.

Finally, a rule requiring local action within a reasonable time provides adequate notice to the public, providers, and the courts that reasonable and generally acceptable time frames for local action will be the standard for determining the length of a timely review. The providers have adequate protection so long as the courts take up HDTV appeals on an expedited basis.

C. If the FCC Adopts Time Limitations as Proposed by
Petitioners', a Municipality's Failure to Act Within the
Specified Time Limitation Should not Result in a Constructive
Approval of the Permit Application.

The determination of whether a municipal board of official has acted within an applicable time limitation is a factual matter which is best resolved by the courts. Municipalities deserve the right to prove to a court that they met an applicable time limitation in considering an HDTV development permit application.

III. THE COURTS ARE THE APPROPRIATE FORUM FOR RESOLVING DISPUTES
CONCERNING ADVERSE DETERMINATIONS ON HDTV PERMIT
APPLICATIONS.

Petitioners propose a rule that would allow broadcasters receiving an adverse determination, for any reason, to petition the FCC for a declaratory ruling. They also propose a strict, arbitrary time limitation for FCC action on a request to the FCC for a declaratory ruling.

Declaratory rulings are inherently fact based and are therefore best suited for resolution by the courts. In addition, the Petitioners do not

propose to limit the FCC's authority to issue such rulings to instances where RF emissions serve as the basis for the adverse determination. Issues involving community character, impacts on residential neighborhoods, and other public safety and welfare issues will likely form the basis of local determinations. The CCC respectfully suggests that the local courts are better able to weigh the arguments concerning local impacts from a particular development proposal. The FCC simply cannot be as knowledgeable as a local court when it comes to the local factors which impacted the municipal decision. Finally, the proposed thirty-day time limitation for FCC action may not provide a reasonable amount of time to gather the relevant evidence, which will vary by locality, and make a final determination.

IV. MUNICIPALITIES SHOULD BE ALLOWED TO REQUIRE PROVIDERS TO SUBMIT PROOF OF COMPLIANCE WITH FCC REGULATIONS FOR RF EMISSIONS.

Petitioners propose to remove from local consideration regulations based on the environmental or health effects of RF emissions.

Due to the FCC's blanket licensing process for RF emissions, the FCC will not know the location or actual emissions of many, if not most, facilities. Because the FCC does not effectively audit or check provider compliance with RF requirements at the local level, the result is a compliance system based almost entirely on industry certification. The issue of RF emissions presents a public health concern and the public is entitled to factual information concerning particular facilities located within their community. In order to ensure compliance, local governments should be allowed to require HDTV providers to prove that the FCC's RF emission standards are met. We therefore urge the FCC to work with local governments to develop recommended RF compliance monitoring procedures that are fully responsive to the public's expressed concerns on RF safety issues.

CONCLUSION

For the foregoing reasons the CCC respectfully requests that the FCC decline to adopt the Petitioners' proposed rules limiting the scope of local review and permitting of HDTV facilities. Similarly, the CCC respectfully requests that the FCC decline to adopt the Petitioners' proposed time limitations for action by local authorities on HDTV permit applications.

Respectfully Submitted:

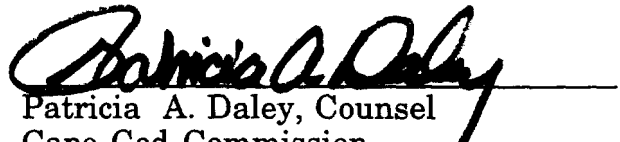
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CONCLUSION

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**Model Bylaw
for
Personal Wireless Service Facilities**

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June, 1997

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Model Bylaw for Personal Wireless Service Facilities for Towns in Barnstable County, Massachusetts

BACKGROUND

The Cape Cod Commission has created a Model Bylaw for use by Barnstable County towns in reviewing proposed personal wireless service facilities. The Model Bylaw was drafted in cooperation with the planning consulting firm of Kreines & Kreines, Inc. of Tiburon, California and relies in part upon materials provided to the Cape Cod Commission by the Boston law firm of Choate, Hall & Stewart.

The intent in drafting the model Personal Wireless Service Facility Bylaw is to give the towns in Barnstable County a starting point from which they can develop their own bylaws. It is possible that a local bylaw might be virtually identical to the model or might vary substantially, depending upon local conditions. The Cape Cod Commission would welcome the opportunity to work with individual towns on crafting their own bylaws.

*The Personal Wireless Service Facility Bylaw is presented to help towns address many of the recommendations presented in the 1997 publication *Siting Criteria for Personal Wireless Facilities*. This document and the Model Bylaw were funded in part by a Municipal Incentive Grant from the Massachusetts Department of Housing and Community Development and are available from the Cape Cod Commission in Barnstable. The *Siting Criteria* report proposes criteria by which personal wireless service facility applications can be evaluated and shows specific characteristics of siting and design by which decisions can be reached on the disposition of each application.*

Towns may need to develop a different set of categories for personal wireless service facilities review. Typically, zoning bylaws divide land into use districts (e.g. residential, commercial, industrial). A town's standard regulatory approach, beginning with an application form, may require changes in order to facilitate review and approval of personal wireless service facilities.

01.0 Purpose and Intent

It is the express purpose of this bylaw to minimize the visual and environmental impacts of personal wireless service facilities. The Bylaw enables the review and approval of personal wireless service facilities by the Town's Planning Board (or Zoning Board of Appeals) in keeping with the Town's existing bylaws and historic development patterns, including the size and spacing of structures and open spaces. This bylaw is intended to be used in conjunction with other regulations adopted by the Town, including historic

district regulations, site plan review and other local bylaws designed to encourage appropriate land use, environmental protection, and provision of adequate infrastructure development on Cape Cod.

The regulation of personal wireless service facilities is consistent with the purpose of the Cape Cod Commission Act and planning efforts of the town through its local comprehensive plan to further the conservation and preservation of developed, natural and undeveloped areas, wildlife, flora and habitats for endangered species; the preservation of coastal resources; protection of the natural resources of Cape Cod; balanced economic growth; the provision of adequate capital facilities; the coordination of the provision of adequate capital facilities with the achievement of other goals; and the preservation of historical, cultural, archaeological, architectural and recreational values.

Commentary: Many towns on Cape Cod have already adopted, or are considering adopting amendments to their existing zoning bylaws for reviewing and approving personal wireless service facilities. It is not the intent of this Model Bylaw to drastically change those amendments, but rather to suggest an approach to regulating these facilities that is flexible enough to work with each town's distinct approach.

A Special Permit approach is recommended in this Model Bylaw rather than permitting personal wireless service facilities by right in selective zoning districts. The difference between the two approaches is critical:

- If a personal wireless service facility is permitted by right in a zoning district, then the basic assumption is that the personal wireless service facility could go anywhere within that zoning district provided certain dimensional requirements are met. The Model Bylaw does not recommend this approach because there may be sensitive resources in any zoning district that could be negatively affected by these facilities.

- If a personal wireless service facility is permitted by Special Permit, then the basic assumption is that the personal wireless service facility could go anywhere in the Town, providing certain discretionary and dimensional requirements are met. The Special Permit regulations of the Model Bylaw are intended to mitigate any negative impacts of these facilities.

Creation of an overlay district is another approach to regulating wireless facilities. Creating an overlay zone requires mapping of key resources such as scenic viewsheds, historic resources and areas of environmental or visual sensitivity so that it can be determined where wireless facilities are appropriate.

The Model Bylaw takes a Special Permit approach, which accepts personal

wireless service facilities as potentially permissible in: a) all parts of the Cape Cod towns, including residential areas, provided that these facilities are consistent with the height of surrounding structures and vegetation and b) in designated Wireless Service Overlay Districts for taller structures. Both approaches require Cape Cod towns to draw the requirements for Special Permits and Overlay Districts very strictly.

02.0 Definitions

02.1 Above Ground Level (AGL). A measurement of height from the natural grade of a site to the highest point of a structure.

Commentary: The height of a personal wireless service facility is usually expressed as "AGL" or "above ground level".

02.2 Antenna. The surface from which wireless radio signals are sent and received by a personal wireless service facility.

02.3 Camouflaged. A personal wireless service facility that is disguised, hidden, part of an existing or proposed structure or placed within an existing or proposed structure is considered "camouflaged."

02.4 Carrier. A company that provides wireless services.

Commentary: Sometimes carriers are called "providers," but this is not a recommended term. Providers can actually be retail agents selling wireless services that they buy from carriers.

02.5 Co-location. The use of a single mount on the ground by more than one carrier (vertical co-location) and/or several mounts on an existing building or structure by more than one carrier.

Commentary: Each service on a co-location is a separate personal wireless service facility, so that a "tri-location" is comprised of three personal wireless service facilities. A carrier may own all three services, but since the services are different, the facility is generally called a "co-location" and has three distinct personal wireless service facilities.

02.6 Cross-polarized (or dual-polarized) antenna. A low mount that has three panels flush mounted or attached very close to the shaft.

02.7 Elevation. The measurement of height above sea level.

Commentary: The elevation of grade or ground level is given in many ways, usually Above Mean Sea Level (AMSL). The height of the personal wireless

service facility is often given in AGL. The total elevation of the personal wireless service facility is AGL plus AMSL.

02.8 Environmental Assessment (EA). An EA is the document required by the Federal Communications Commission (FCC) and the National Environmental Policy Act (NEPA) when a personal wireless service facility is placed in certain designated areas.

02.9 Equipment Shelter. An enclosed structure, cabinet, shed or box at the base of the mount within which are housed batteries and electrical equipment.

Commentary: This equipment is connected to the antenna by cable. Equipment shelters are also called "base transceiver stations" for PCS.

02.10 Fall Zone. The area on the ground within a prescribed radius from the base of a personal wireless service facility. The fall zone is the area within which there is a potential hazard from falling debris (such as ice) or collapsing material.

02.11 Functionally Equivalent Services. Cellular, Personal Communication Services (PCS), Enhanced Specialized Mobile Radio, Specialized Mobile Radio and Paging.

Commentary: According to the Telecommunications Act of 1996, these five services must receive the same treatment by local government.

02.12 Guyed Tower. A monopole or lattice tower that is tied to the ground or other surface by diagonal cables.

02.13 Lattice Tower. A type of mount that is self-supporting with multiple legs and cross-bracing of structural steel.

02.14 Licensed Carrier. A company authorized by the FCC to construct and operate a commercial mobile radio services system.

02.15 Monopole. The type of mount that is self-supporting with a single shaft of wood, steel or concrete and a platform (or racks) for panel antennas arrayed at the top.

Commentary: Vertical co-locations often have arrays at intermediate positions on the monopole.

02.16 Mount. The structure or surface upon which antennas are mounted, including the following four types of mounts:

1. Roof-mounted. Mounted on the roof of a building.

2. Side-mounted. Mounted on the side of a building.
3. Ground-mounted. Mounted on the ground.
4. Structure-mounted. Mounted on a structure other than a building.

02.17 Omnidirectional (whip) antenna. A thin rod that beams and receives a signal in all directions.

Commentary: Often called a "whip" antenna, these "omni's" have less range but thinner silhouettes than panel antennas.

02.18 Panel Antenna. A flat surface antenna usually developed in multiples.

Commentary: Panel antennas are often deployed in three directional "sectors" (0 degrees to 120 degrees, 120 degrees to 240 degrees and 240 degrees to 360 degrees) and used to concentrate or beam the signal into (or from) that sector only.

02.19 Personal Wireless Service Facility. Facility for the provision of personal wireless services, as defined by the Telecommunications Act.

Commentary: A personal wireless service facility is the appropriate term for "cell site" in ordinances and other official documents.

02.20 Personal Wireless Services. The three types of services regulated by this Model Bylaw.

Commentary: Commercial mobile radio services, unlicensed wireless services, and common carrier wireless exchange access services are the FCC personal wireless services as described in the Telecommunications Act of 1996.

02.21 Radiofrequency (RF) Engineer. An engineer specializing in electrical or microwave engineering, especially the study of radiofrequencies.

Commentary: When RF engineers are certified or licensed, they are known as Professional Engineers.

02.22 Radiofrequency Radiation (RFR). The emissions from personal wireless service facilities.

Commentary: It is RFR, not all EMF, that is regulated by the FCC Guidelines for Evaluating the Environmental Effects of Radiofrequency Radiation (FCC

Guidelines).¹

02.23 Security Barrier. A locked, impenetrable wall, fence or berm that completely seals an area from unauthorized entry or trespass.

Commentary: Without security barriers, unauthorized people could easily access personal wireless service facilities and be exposed to RFR.

02.24 Separation. The distance between one carrier's array of antennas and another carrier's array.

03.0 District Regulations

03.1 Use Regulations A personal wireless service facility shall require a building permit in all cases and may be permitted as follows:

03.1.1 A personal wireless service facility may locate on any existing guyed tower, lattice tower, monopole, electric utility transmission tower, fire tower or water tower, provided that the installation of the new facility does not increase the height of the existing structure except as provided in Section 03.3.5 below. Such installations shall not require a Special Permit but shall require site plan approval by the town.

Commentary: Different towns have different procedures for site plan review. In some towns the planning board is responsible for site plan review; in others it is an administrative process conducted by department heads. Each town should integrate the review of personal wireless service facilities into its existing site plan review process.

03.1.2 A personal wireless service facility involving construction of one or more ground or building (roof or side) mounts shall require a Special Permit. Such facilities may locate by Special Permit in all zoning districts within the Town, provided that the proposed use complies with the height and setback requirements of Section 03.3 and all of the Special Permit Regulations set forth in Section 04.0 of this Bylaw.

03.1.3 A personal wireless service facility that exceeds the height restrictions of Sections 03.3.1 - 03.3.5 may be permitted by Special Permit in a designated Wireless Service Overlay District provided that the proposed facility complies with the height restrictions of Section 03.3.6, and all of the setback and Special

¹ The FCC Guidelines were published on August 1, 1996. The FCC has extended the implementation date of the FCC Guidelines from January 1, 1997 to September 1, 1997. The existing guidelines remain in effect.

Permit Regulations set forth in Sections 03.3 and 04.0 of this Bylaw.

Commentary: The Model Bylaw recommends allowing personal wireless service facilities by right on existing towers with site plan approval by the town. New facilities involving ground or building mounts would require a Special Permit. They would be allowed throughout the town provided that they meet certain height restrictions and performance standards. Taller structures would only be permitted in designated Wireless Service Overlay Districts.

The model bylaw recommends that towns develop Overlay Districts which permit the location of taller personal wireless service facilities by identifying areas that are less sensitive to visual impacts. Wireless Service Overlay Districts would not need to be established for an entire zoning district, but could be designated for a specific area depending upon the visual or environmental sensitivity of a particular area. Greater heights could be permitted in these areas if co-location is proposed. Some municipalities determine height restrictions based upon the number of co-locations on one facility. Overlay Districts would still be subject to the other setback and Special Permit regulations.

As part of the planning process, towns may wish to identify and map certain areas where personal wireless service facilities are prohibited unless fully camouflaged. For example, a town may not want these facilities to be located within historic districts or Areas of Critical Environmental Concern unless the facilities can be completely hidden.

03.2 Location Applicants seeking approval for personal wireless service facilities shall comply with the following:

03.2.1 If feasible, personal wireless service facilities shall be located on existing structures, including but not limited to buildings, water towers, existing telecommunications facilities, utility poles and towers, and related facilities, provided that such installation preserves the character and integrity of those structures. In particular, applicants are urged to consider use of existing telephone and electric utility structures as sites for one or more personal wireless service facilities. The applicant shall have the burden of proving that there are no feasible existing structures upon which to locate.

03.2.2 If the applicant demonstrates that it is not feasible to locate on an existing structure, personal wireless service facilities shall be designed so as to be camouflaged to the greatest extent possible, including but not limited to: use of compatible building materials and colors, screening, landscaping and placement within trees.

03.2.3 The applicant shall submit documentation of the legal right to install

and use the proposed facility mount at the time of application for a building permit and/or Special Permit.

Commentary: This section establishes the community's priorities for the type of facilities it wants to encourage. The Model Bylaw's approach is to encourage the use of existing structures as much as possible. The existing electrical utility distribution network offers the opportunity to co-locate many personal wireless service facilities along existing utility rights of way. If it is infeasible to use existing structures, then other kinds of facilities may be proposed, but there is strong emphasis on camouflaging them to minimize the visual impact.

03.3 Dimensional Requirements Personal wireless service facilities shall comply with the following requirements:

03.3.1 Height, General Regardless of the type of mount, personal wireless service facilities shall be no higher than ten feet above the average height of buildings within 300 feet of the proposed facility. In addition, the height of a personal wireless service facility shall not exceed by more than ten feet the height limits of the zoning district in which the facility is proposed to be located, unless the facility is completely camouflaged such as within a flagpole, steeple, chimney, or similar structure. Personal wireless service facilities may locate on a building that is legally non-conforming with respect to height, provided that the facilities do not project above the existing building height.

03.3.2 Height, Ground-Mounted Facilities Ground-mounted personal wireless service facilities shall not project higher than ten feet above the average building height or, if there are no buildings within 300 feet, these facilities shall not project higher than ten feet above the average tree canopy height, measured from ground level (AGL). If there are no buildings within 300 feet of the proposed site of the facility, all ground-mounted personal wireless service facilities shall be surrounded by dense tree growth to screen views of the facility in all directions. These trees may be existing on the subject property or planted on site.

03.3.3 Height, Side- and Roof-Mounted Facilities Side- and roof-mounted personal wireless service facilities shall not project more than ten feet above the height of an existing building nor project more than ten feet above the height limit of the zoning district within which the facility is located. Personal wireless service facilities may locate on a building that is legally non-conforming with respect to height, provided that the facilities do not project above the existing building height.

03.3.4 Height, Existing Structures New antennas located on any of the following structures existing on the effective date of this bylaw shall be exempt from the height restrictions of this bylaw provided that there is no increase in

height of the existing structure as a result of the installation of a personal wireless service facility: Water towers, guyed towers, lattice towers, fire towers and monopoles.

03.3.5 Height, Existing Structures, (Utility) New antennas located on any of the following existing structures shall be exempt from the height restrictions of this bylaw provided that there is no more than a twenty foot (20') increase in the height of the existing structure as a result of the installation of a personal wireless service facility: electric transmission and distribution towers, telephone poles and similar existing utility structures. This exemption shall not apply in Historic Districts, within 150 feet of the right-of-way of any scenic roadway, or in designated scenic viewsheds.

Commentary: This section sets height limits based on the nature of surrounding structures and vegetation. The intention is to keep personal wireless service facilities in scale with surrounding buildings and tree heights. What this means is that there will be more wireless sites, spaced more closely together, but that they will be less visually intrusive than taller facilities. The bylaw allows for a small increment of height (ten feet) above average building and tree heights as well as above local zoning limits to ensure that the facilities can function effectively within a reasonable geographic range. Most Cape Cod towns limit building heights to 35 feet, so in many areas, this provision would permit facilities to go as high as 45 feet (ten feet above the local zoning limit). There is an exception for new antennas located on certain existing structures. This is intended to encourage the carriers to use these sites.

03.3.6 Height, Wireless Facility Overlay Districts Where the town establishes Wireless Facility Overlay Districts (as designated on the town zoning map), personal wireless service facilities of up to 150 feet in height may be permitted by Special Permit. Monopoles are the preferred type of mount for such taller structures. Such structures shall comply with all setback and Special Permit Regulations set forth in this Bylaw.

Commentary: The Model Bylaw recommends that towns designate some limited areas where taller structures are allowed by creation of Wireless Facility Overlay Districts. Such designations will require careful analysis of surrounding land use, viewsheds, environmental and historic resources. It may be that there are some town-owned properties that would be suitable sites for taller structures. Existing electric utility rights of way (or portions thereof) should also be considered for inclusion in such Overlay Districts. Monopoles are recommended for these taller structures because they are less visually intrusive than lattice towers or guyed towers.

03.3.7 Setbacks All personal wireless service facilities and their equipment shelters shall comply with the building setback provisions of the zoning district

in which the facility is located. In addition, the following setbacks shall be observed:

03.3.7.1 In order to ensure public safety, the minimum distance from the base of any ground-mounted personal wireless service facility to any property line, road, habitable dwelling, business or institutional use, or public recreational area shall be the height of the facility/mount, including any antennas or other appurtenances. This setback is considered a "fall zone".

03.3.7.2 In the event that an existing structure is proposed as a mount for a personal wireless service facility, a fall zone shall not be required, but the setback provisions of the zoning district shall apply. In the case of pre-existing non-conforming structures, personal wireless service facilities and their equipment shelters shall not increase any non-conformities, except as provided in Section 03.3.8 below.

03.3.8 Flexibility In reviewing a Special Permit application for a personal wireless service facility, the Planning Board (SPGA) may reduce the required fall zone and/or setback distance of the zoning district by as much as 50% of the required distance, if it finds that a substantially better design will result from such reduction. In making such a finding, the Planning Board shall consider both the visual and safety impacts of the proposed use.

Commentary: The Bylaw requires a fall zone around ground-mounted facilities in order to prevent hazards to people and neighboring property from potential facility collapse or falling debris. Fall zones beyond standard setbacks are not required for facilities mounted on existing structures. Section 03.3.8 gives the Planning Board some flexibility in applying setback and fall zone standards in order to achieve the best design. However, it is important that the Planning Board take both visual and safety concerns into account before granting any reductions in these standards.

04.0 Special Permit Regulations All personal wireless service facilities shall comply with the Performance Standards set forth in this section.

04.1 Design Standards

Commentary: The design of a personal wireless service facility determines its visibility and its impact on community character. Height and fall zone/setback standards will have an impact on the visibility of personal wireless service facilities, but they may still be visible from public areas and surrounding residential properties. The following standards are intended to limit negative visual impacts from these facilities through effective design. Specific standards are included for important visual resource areas such as historic districts and scenic landscapes. Towns may want to prohibit these facilities in some